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The Red Wolf (*Canis rufus*): Extinct in Alabama

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Over the years I have had the privilege of talking to landowners, hunters, and casual wildlife observers about their observations of nature and the conclusions drawn from these experiences. People often tell me that they saw a wolf, and this assumption is usually based on the size of the animal observed. Almost inevitably these are coyotes, which frequently appear much larger than they actually are, due to their winter pelt.

History

Historical accounts suggest that red wolves *(Canis rufus)* were present across the Southeast in the 1800's and that populations declined rapidly in the early 1900's due to an increasing human population and large-scale habitat manipulation, particularly clearing of forests. Bounties were instituted due to fears and misconceptions concerning wolves. Only a few studies relating to red wolves were done in Texas and Louisiana during the 1960's and 1970's; therefore little is known about them. In 1967, the red wolf was declared an endangered species, and it was declared biologically extinct in the wild in 1980.

Conversely, before 1970, there weren't any coyotes east of the Mississippi River. As the red wolf population declined in the Southeast, coyote populations increased rapidly, and they now occur in all of the southeastern states. The release of coyotes into high fenced areas for hunting helped to expand their range as individuals escaped from these pens and established breeding populations. The success of coyotes may be attributed to their high rate of reproduction, diverse diet and habitat use, ability to live in close proximity to humans and lack of other large canids to compete with for available resources.

Restoration Attempts

Restoring large carnivores such as bears, mountain lions, or wolves is a difficult undertaking at best. These type species have home ranges that may cover thousands of acres, which usually limits restoration efforts to military bases, national forests, or national wildlife refuges. Areas such as these are among the only remaining large habitats with minimal disturbance from humans and few bisecting roads. Public opposition to restoration attempts can be fierce due to concerns about livestock predation or misconceptions regarding interactions with humans.

Due to coyote encroachment from the west and the resulting hybridization with wolves, the decision was made to capture the remaining wolves and start captive breeding "pure" wolves to preserve the species. From 1973 until 1980, the U.S. Fish and Wildlife Service captured 400 individuals from southeast Texas and southwest Louisiana. They were compared to the established morphological standards to restore a true breeding population of wolves in North Carolina. Forty-three out of four hundred met the criteria and after cross breeding, only 14 offspring met the criteria. The existing population of wolves in North Carolina has descended from 12 of these 14 offspring. There are currently between 100-200 wolves mostly in North Carolina with a few small isolated populations on islands off the coast of South Carolina and Florida.

George Gentry/U.S. Fish & Wildlife Service

U.S. Fish and Wildlife employee holds two red wolf pups that were bred in captivity. The red wolf is an endangered species that is currently found in the wild only as experimental populations in the Carolinas and Florida.

Taxonomy

The taxonomic integrity of red wolves has been debated for many years as to whether they are entirely distinct from coyotes as a species. There have not been any diagnosable mitochondrial markers identifying the red wolf as a separate species, although gray wolves and Mexican gray wolves show distinct characteristics.

Once a population gets low enough that only a few surviving individuals exist, the population may go through what is called a genetic bottleneck. Healthy wildlife populations thrive on the exchange of genetic material between populations, and reducing the number of breeding individuals can lead to reduced genetic diversity and an increase in abnormalities through the expression of recessive alleles.

Future Outlook

I believe that the population of "red wolves" that currently exist in North Carolina and other areas are a hybridized cross with coyotes. For this reason, I believe the species is genetically extinct. The factors that drove this species to extinction (habitat destruction, urban encroachment and negative public perceptions) are still present today; therefore reintroduction of "red wolves" on a large scale is highly unlikely. As the human population grows, wildlife species that can't coexist with humans are in decline and species such as white-tailed deer and coyotes that can coexist with humans are thriving. If habitat fragmentation continues at the same rate, this same trend will continue in the future.